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PRICE FLEXIBILITY AND FULL EMPLOYMENT: LOSING THE PLOT?

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Price Flexibility and Full Employment: Losing the Plot?

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Abstract

This paper, from a historical perspective, questions the thesis (again in fashion) that price flexibility ensures full employment. The point is made that explanation of unemployment in terms of wage/price stickiness typified pre-Keynesian accounts, but not Keynes's theory of involuntary unemployment. Under uncertainty, no set of prices consistent with full employment may actually exist: if so, price flexibility is not the critical factor. Finally, with respect to current use of the "AD/AS model", we note that the strong arguments against attribution of necessarily beneficient effects to price and wage flexibility, which ought to be well-known, seem now to be forgotten.

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Introduction

At the present time, standard macro textbooks are wont to convey the view that the natural state of the economy is one of full employment, and that unemployment, when it occurs, can be considered a temporary, disequilibrium phenomenon resulting from stickiness of prices and consequent slowness of the market mechanism in performing its equilibrating role. It is taken for granted that any upsetting impact of demand disturbances on output and employment will in time be eliminated as the price mechanism "grinds out" the appropriate set of relative values. With respect to the history of economic analysis, the reader is given to understand that Keynes's contribution to macro theory was to direct attention to the disequilibrium conditions of the short run, thereby complementing the traditional ("classical") theory which was concerned primarily with the long-run equilibrium state of the system.

Take a couple of instances of such textbook pronouncements. One refers to stickiness of relative prices, and the other to inflexibility of the general price level; both associate the Keynesian tradition with non-adjustment of prices, and both associate the persistence of unemployment with inadequate price adjustment.

> The classical supply curve is based on the belief that the labour market works smoothly, always maintaining full employment of the labour force. Movements in the wage are the mechanism through which full employment is maintained. The Keynesian aggregate supply curve is instead based on the assumption that the wage does not change much or at all when there is unemployment, and thus that unemployment can continue for some time . . .
>
> (Dornbusch and Fischer, 1990, p.225)

> We can now see the key difference between the Keynesian and classical approaches to the determination of national income. The Keynesian assumption . . . is that the price level is stuck . . . The classical assumption is that the price level is flexible . . . The price level adjusts to ensure that national income is always at the natural rate. The classical assumption best describes the long run . . . The Keynesian assumption best describes the short.
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> (Mankiw, 1994, p.275)

The fact that such views can be asserted even today suggests, on the part of their proponents, a lack of familiarity with the course of development of macroeconomic theory; in particular it

gives reason to suspect deficiency in understanding of the powerful arguments which cast doubt on the thesis that price flexibility guarantees full employment. We believe that a review of how thinking on this important issue has evolved may point to a different conception which, from the perspective of mainstream modern macroeconomics, seems all too frequently overlooked or forgotten. The purpose of this paper is therefore to put before the reader a less comfortable interpretation of the working of the macro system which calls in question the validity of the fashionable presumption that, as far as full employment is concerned, it is all a matter of "getting prices right".

The old classical orthodoxy

To get our bearings, we begin by going back to the earliest debates as to the cause of unemployment in the (then emerging) industrial economy. At the beginning of the nineteenth century, amongst those with an interest in economic affairs, controversy broke out over what we would now regard as a question of macroeconomic stability. The issue was the possibility of a general "glut" - of the occurrence of a state of affairs characterised by general overproduction relative to demand for output, accompanied by widespread unemployment.

Proponents of what become the orthodox view (Say, James Mill, Ricardo and J. S. Mill) held that no general deficiency of planned demand relative to productive capacity could ever occur. These authorities did not in fact focus on price flexibility as the key to full employment: their position was rather that a macroeconomic problem of insufficient demand was simply inconceivable. They were absolutely confident that the fear of the "heretics" (e.g. Malthus, Chalmers and Sismondi) of "too much" investment causing such expansion of productive capacity as to outrun the growth of demand, was totally without foundation either in theory or in fact. While it was of course recognised that oversupply of any particular commodity could occur, a *general* state of overproduction across the economy, on account of want of planned demand, was deemed impossible.

Advocates of this position cited "Say's Law" - the proposition that the very act of supplying goods to the market implies a corresponding volume of demand - arguing that a producer was

desirous either of consuming his own product or of exchanging it for the products of others. Essentially, the view was that the desire to purchase could not fail to keep up with the volume of goods produced; even if savings were made out of current income, such saving would automatically be matched by planned investment. Thus, from the orthodox perspective, the understanding was simply that, in the natural course of events, demand would grow along with capacity. Orthodox theorists did not admit the possibility of an autonomously-occurring want of demand and so did not think in terms of price adjustment as providing a solution.

The neoclassical version

While the political economy of the old classical economists had been primarily concerned with questions concerning the nature, causes and process of economic growth, the neoclassical or marginalist economics which came to dominate the scene towards the end of the nineteenth century concentrated much more narrowly on the optimising behaviour of individual agents. The defining characteristic of marginalist theory is to represent economic problems as issues of optimal choice. This approach resulted from the deliberate application of mathematical reasoning to economic analysis - bringing to economic theory the notions of marginal increments and optimisation through marginal adjustment. Individual agents within the economy, be they consumers or producers, are depicted as engaging in acts of rational choice, balancing marginal benefit against marginal cost. The activities of these rational optimisers are understood to be co-ordinated through the price mechanism. Markets are presumed to clear, establishing an equilibrium state from which, in the given circumstances, no one has any incentive to depart. The marginalist analysis is thus focused on the attainment of equilibrium through the working of the market mechanism; correspondingly, the solution of a problem - the elimination of some disequilibrium situation - is characteristically envisaged in terms of “getting prices right”.

At least until the inter-war years neoclassical economists, concentrating on supply and demand and microeconomic matters, gave relatively little attention to macroeconomic issues (though in the 1920s and 1930s intensive debate on macro matters did develop). With respect to the employment issue, the Ricardian contention that an autonomously occurring deficiency of aggregate demand was not to be feared was carried through into the new era. The argument was

however now developed with a neoclassical twist. The rationalisation brought forward to justify the thesis that the value of planned demand naturally tends to equality with the value of output produced was that *it is the proper functioning of the price mechanism which ensures equality of planned investment with savings out of full employment income.* Specifically, it was held that the rate of interest served to equate savings and planned investment. Establishment of the "natural" rate of interest would ensure equilibrium in the savings-investment (loanable funds) market, guaranteeing the recirculation as effective demand for output of whatever portion of current income was reserved as savings. In that situation saving becomes equivalent to consumption as a source of demand. Keynes (1936, p.19) quotes Marshall to that effect:

> The whole of a man's income is expended in the purchase of services and of commodities. It is indeed commonly said that a man spends some portion of his income and saves another. But it is a familiar economic axiom that a man purchases labour and commodities with that portion of his income which he saves just as much as he does with that he is said to spend. He is said to spend when he seeks to obtain present enjoyment from the services and commodities which he purchases. He is said to save when he causes the labour and commodities which he purchases to be devoted to the production of wealth from which he expects to derive the means of enjoyment in the future.

Thus, in the neoclassical era, as had not been the case in classical times, the balancing of savings and investment was recognised as potentially problematical, but it was believed that the efficient operation of the price mechanism - in the form of the "interest rate mechanism" - would (eventually) resolve any problem which might arise. It was accepted however that this mechanism did not work with perfect efficiency. Neoclassical writers (e.g. Wicksell, Pigou, D. H. Robertson, and the early Keynes) held that slow operation of the interest rate mechanism permitted short-term variations in employment and output. If, for instance, a change was perceived in investment prospects, the *natural* rate would alter to maintain equality between savings and investment. The trouble was that the *actual* rate which obtained in the market, and to which agents responded, was the "money" rate as set by the banks; if the banks were slow in adjusting their rate to the change in investment conditions, the money rate would fail to move with the natural rate, resulting in an excess or deficiency of investment spending above or below savings. The understanding was that, if the money rate happened to fall short of the natural rate, the excess of intended investment over savings would induce increased bank lending;

alternatively, if the money rate was too high, and savings exceeded investment, the money supply would fall. Spending would vary with changes in the quantity of money. What happened next, following an increase or decrease in spending, would depend on the degree of money wage and price flexibility. If, with full flexibility, all money values responded immediately and proportionately to the monetary change, the price level would alter without any impact on output and employment. But if, as was considered the more likely outcome, commodity prices altered more quickly than money wages, real wages would be affected, resulting in changes in employment and output. In time, of course, once the money rate caught up with the natural rate and real wages were restored to their "proper" value, activity would return to its normal level. The cyclical unemployment associated with such a sequence of events could be classified as *frictional.*

In the inter-war period, however, it became evident to Professor Pigou that the abnormally high and prolonged unemployment then being suffered in Britain represented something other than the regular fluctuations of the trade cycle as experienced in earlier years. Temporary malfunctioning of the interest rate mechanism did not seem enough to account for the current problem of persisting unemployment. But Pigou still interpreted the situation as a problem with prices - specifically the price of labour services. His diagnosis (presented in his 1933 *Theory of Unemployment*) was that the distressing contemporary situation could be understood only as the result of an unduly high level of real wages; Pigou (1933, p.256) surmised that, after the dramatic changes in prices and money wages during the war and immediate post-war years, the level of money wages had got "stuck" in an inappropriate relationship to the level of commodity prices.

> Since the post-Armistice boom, however, the unemployment situation has been very different from what it was before the war. Instead of a percentage of unemployment amounting, on the average of good and bad years, to some 4 1/2 per cent, post-war unemployment has moved from a mean from twice to three times as large as this. This circumstance suggests strongly that the goal of long-run tendencies in recent times has been a wage level substantially above that proper to nil unemployment, and that a substantial part of post-war unemployment is attributable to that fact.

In other words, workers, maintaining the going level of money wages, were pricing themselves out of employment. The consequent unemployment could be described as being, in effect, *"voluntary"*. The remedy proposed was, in modern parlance, "to get prices right" by engineering a cut in real wages. Pigou, apparently taking it for granted that the interest rate mechanism would, in principle, ensure equality of planned spending with the value of output produced (i.e. tacitly subscribing to Say's Law) was confident that employment would then increase as, with lower wages, firms would move down their "labour demand" (marginal product of labour) schedules.

As to the practicability of this strategy, much careful assessment of production conditions led Pigou (1933, p.106) to the conclusion that what he called the "real demand function for labour" was fairly elastic, implying that no very great reduction in real wages was required to boost employment to a satisfactory level.

> . . . we may, therefore, not unreasonably put the elasticity of the money demand for labour in times of deep depression at not less numerically than -1.5. . . . We have thus margin enough for a fairly confident claim that, in times of deep depression, after an interval not less than the period of production of the generality of wage-goods and export goods, an all-round cut of 10 per cent in money rates of wages[1] would lead, other things being equal, to a more than 10 per cent expansion in the aggregate volume of labour demanded, and so, apart from unfilled vacancies, in the volume of employment

It was specifically on Pigou's *Theory of Unemployment*, and his diagnosis that the root of the trouble lay in the labour market - stickiness of real wages being responsible for the persisting high unemployment of the period - that Keynes set his sights as constituting the fullest and most explicit statement of what he understood to be the "classical" position.

The Keynes theory

[1] It should be emphasised here that Pigou of course held that employment was a function of the real wage; in keeping with that understanding, by this stage in his argument he had already attempted to take into account in his calculations "what changes in real rates of wages are implied by given changes in money wages"; *vide*: *The Theory of Unemployment,* Part II, Chap. X.

By the mid-1930s Keynes had eventually arrived, in his own mind, at an understanding of what was wrong with the traditional approach and what was needed in its place. As Keynes saw the situation, the classical theory failed to engage with the real world conditions of the time – it failed to provide a believable explanation of the major contemporary economic problem, that of high and persistent unemployment: the classical theory was, in his opinion, incapable of comprehending the true nature of the problem:

> In addition to "frictional" unemployment, (the classical theory) is also compatible with "voluntary" unemployment due to the refusal or inability of a unit of labour, as a result of legislation or social practices or of combination for collective bargaining or of slow response to change or of mere human obstinacy, to accept a reward corresponding to the value of the product attributable to its marginal productivity. But these two categories of "frictional" unemployment and "voluntary" unemployment are comprehensive. The classical postulates do not admit of the possibility of the third category which I shall define . . . as "involuntary" unemployment.[2]
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> (Keynes, 1936, p.6)

Keynes's explanation of the occurrence of *involuntary* unemployment depended on his identifying aggregate demand for output, *not* conditions of labour supply, as the key determinant of levels of output and employment within the economy. Aggregate demand was no longer treated as a "tame" variable, ultimately tied to the value of output supplied. If there happened to be insufficient demand within the system to justify full employment, workers would find themselves, against their wishes, out of a job, even if the terms on which they sought work were perfectly compatible with their employment under other conditions of demand. The problem was not, as Pigou viewed it, one of wages being stuck at an inappropriate real level, but one of insufficient planned demand for output.

[2] Keynes's famously obscure definition of involuntary unemployment (1936, p.15) reads thus: "Men are involuntarily unemployed if, in the event of a small rise in the price of wage-goods relatively to the money wage, both the aggregate supply of labour willing to work for the current money-wage and the aggregate demand for it at that wage would be greater than the existing volume of employment". Suffice it to say here, the essential point is that (in terms of the labour-market diagram) Keynes envisages, with deficient demand and unemployment, a difference (diagramatically, a gap) existing, at the going full-employment rate of wages, between the quantity of labour available for employment and the quantity actually demanded by employers; the fact that labour is "off its supply curve" is indicative of the involuntary nature of that unemployment.

Keynes rejected both the rationalisations previously offered for not worrying about the adequacy of aggregate demand. He saw demand as independent of supply, as an unstable and unreliable factor reflecting the expenditure plans of consumers and investors: there was no guarantee, as old authorities such as Ricardo and J S Mill had supposed, that the very act of production implied demand - that the value of planned expenditures would naturally and automatically match the value of output produced. Neither, Keynes argued, could reliance be placed on the neoclassical notion of the "interest rate mechanism": according to his new theory of liquidity preference, the role of the rate of interest (a monetary, not a "real" phenomenon) was to reconcile asset preferences and demands in the financial markets, and not to equate the value of spending on new capital goods with the value of saving. [We can add that the neoclassical "productivity and thrift" treatment of interest as equating the demand and supply of (new) "capital" is undermined by the "Cambridge critique" which demonstrates that to attempt to explain in these terms the rate of interest ("the price of capital"), as equal to the marginal product of capital, is logically incoherent.]

Keynes considered carefully the question of whether wage and price flexibility would help to get the economy out of a demand-deficient state of slump. From his perspective, any mechanism to counter unemployment would have to work via a stimulus to demand: he concluded that neither real wage reductions (even if such could be achieved), nor falling money wages and prices, would help; either would probably make the situation worse.[3] The economy could not be

[3] Keynes favoured price stability, rather than downward price flexibility, as preferable in slump conditions. Thus (1936, pp.269-70): "It follows, therefore, that if labour were to respond to conditions of gradually diminishing employment by offering its services at a gradually diminishing money-wage, this would not, as a rule, have the effect of reducing real wages and might even have the effect of increasing them, through its adverse influence on the volume of output. The chief result of this policy would be to cause a great instability of prices, so violent perhaps as to make business calculations futile in an economic society functioning after the manner of that in which we live. To suppose that a flexible wage policy is a right and proper adjunct of a system which on the whole is one of *laissez-faire*, is the opposite of the truth. . . . In the light of these considerations I am now of the opinion that the maintenance of a stable general level of money-wages is, on a balance of considerations, the most advisable policy for a closed system; whilst the same conclusion will hold good for an open system, provided that equilibrium with the rest of the world can be secured by means of fluctuating exchanges. There are advantages in some degree of

regarded as possessing a reliable "self-righting" capability: government intervention, possibly in the role of "pump-priming", was indicated as necessary to get things moving.

Fundamental to Keynes's "general theory" is his appreciation that the economy exists and functions within real historical time, that wealth-seeking agents must necessarily make decisions respecting asset choice under conditions of uncertainty. Uncertainty, as faced by decision-makers in the real world, cannot always be reduced to calculable, and insurable risk. Thus Keynes (1937), differentiating his conception of the situation from that of the "classics" (present and past), argued that his contemporaries,

> . . . like their predecessors, were dealing with a system in which the amount of the factors employed was given and other relevant facts were known more or less for certain. This does not mean that they were dealing with a system in which change was ruled out, or even one in which the disappointment of expectation was ruled out. But, at any given time, facts and expectations were assumed to be given in a definite and calculable form, and risks, of which, though admitted, no much notice was taken, were supposed to be capable of exact actuarial computation. The calculus of probability, though kept in the background, was supposed to be capable of reducing uncertainty to the same calculable status as certainty itself;

And he goes on to charge "classical" economic theory with being

> . . . one of these pretty, polite techniques which tries to deal with the present by abstracting from the fact that we know very little about the future.

That the *General Theory* is macroeconomics for a world of uncertainty is evident from the importance Keynes attributes to expectations and states of confidence as affecting the behaviour of decision makers, as regards both choice amongst financial assets and the purchase of produced commodities. The fact that decisions have to be made without decision-makers being

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flexibility in the wages of particular industries so as to expedite transfers from those which are relatively declining to those which are relatively expanding. But the money-wage level as a whole should be maintained as stable as possible, at any rate in the short period."

sure of the eventual outcome is central to Keynes's vision of the working of the system: the economy is viewed not as a closed mechanical system, but as one which is "open-ended" in that there can never exist a complete set of markets such that all risks and uncertainties are eliminated by insurance; hopes and fears, imagination and guess-work cannot in the real world be excluded as determining factors in the working of the economic system.

In the view of the present writer, there is no doubt that Keynes's *General Theory* was a truly "revolutionary" contribution.[4] In rejecting interest and wage stickiness explanations of unemployment, and in identifying aggregate demand, which under uncertainty is dependent on expectations and confidence, as the key determining factor, Keynes was indeed making a clear break with received doctrines. The question, however, for historians of economic thought is why mainstream macro theory has in recent times managed so effectively to ignore that break and return to an essentially pre-Keynesian conception of the working of the macro system.

After Keynes

The Keynesian theory pretty quickly became established (at least for the next thirty plus years) as the new orthodoxy: a completely novel body of economic analysis - modern macroeconomics - developed. Prominent in this new literature was the Hicks-Hansen IS/LM model which, integrating the income-expenditure and monetary elements of Keynes's system in a convenient diagram, was generally accepted as satisfactorily representing the essentials of the Keynesian conception. Until the late 1960s, Keynesian theory, although not unchallenged, formed the basis of mainstream macroeconomics.

What challenges to mainstream Keynesian orthodoxy that there were in the early years, although coming from sometimes hostile traditionalists, nevertheless implied acceptance of the essential Keynes proposition that aggregate demand was what mattered with respect to the determination of output and employment. The fact that attention was directed to the determination of demand

rather than, as in previous times, to the level of real wages or to disparity between the "natural" and money rates of interest, indicated just how generally and profoundly thinking had been changed by the publication of the *General Theory*.

One line of criticism built on the notion of the "wealth" or "Pigou effect" as providing a possible automatic rescue-mechanism - the existence of which Keynes had denied - for an economy sunk in heavy unemployment. The argument was that lower prices would increase the real value of the nominal money stock, thus generating a positive wealth effect on household spending; if, the argument went, prices could fall far enough, then aggregate demand would be boosted to full employment level, regardless of any liquidity trap or of interest inelasticity of investment demand. It was however explicitly recognised by theorists who explored this real-balance route (Pigou himself, Patinkin - not to mention Keynes) that the weakness of the wealth effect on consumption, and even more importantly, the negative effects on demand likely to result from a *process* of deflation, ruled the real balance effect out of court as a practical equilibrating mechanism.[5] It was agreed that downward adjustment of money wages in a depression might well make things worse rather than better. While Patinkin emphasised that, from the Walrasian perspective, the dynamic complications of a deflationary process implied a critical question about the *stability* of equilibrium, it is probably fair to say that, all too often, Patinkin's caveat about the attainability of equilibrium was ignored and replaced by a facile presumption that price flexibility was enough to ensure full employment.

A different line of attack on mainstream Keynesianism came from Milton Friedman and the Chicago School who argued, on the basis of alleged empirical evidence, that the macro economy

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[4] In a recent study Laidler (1999) has however argued that the development of macro theory in the 1930s along Keynesian lines should be viewed as being of an evolutionary, rather than revolutionary, character. That assessment is disputed in Grieve (2001).

[5] We may quote Patinkin (1959, pp.582-87) on this: "The automatic adjustment process of the market is too unreliable to serve as the practical basis of a full-employment policy. In other words, though the real balance effect must be taken account of in our theoretical analysis, it is too weak - and, in some cases (due to adverse expectations) too perverse - to fulfil a significant role in our policy considerations".

was much more stable than suggested by Keynes, and that fluctuations in demand and activity were attributable to (avoidable) changes in the money supply, rather than to autonomous variations in the volume of aggregate demand. But again, it is noteworthy that, although Friedman was denying the destabilising effects of changes in confidence and expectations central to Keynes's vision, the argument was nevertheless about the determination, as the key factor, of aggregate demand.

Walrasian macroeconomics

Keynes's understanding that the elimination of unemployment is *not* simply a matter of "getting prices right" can - perhaps surprisingly - be supported by consideration of what we may call "Walrasian macroeconomics". Over the last seventy years the Walrasian general equilibrium model has been adopted by neoclassical theorists as the most appropriate conceptualisation and representation of the economic system. The neoclassical synthesis of the 1950s and 1960s was an attempt to combine Keynesian and Walrasian contributions; the simplified macroeconomic version of the Walrasian system employed in Patinkin's (1965) *Money, Interest and Prices* exemplifies this approach. Let us make use of such a model, employing it specifically to shed light on the question of whether the attainment and maintenance of full employment is in fact a matter of "getting prices right".

First of all, recall the nature of the Walrasian general equilibrium model. The Walrasian model shows the economy as a system of inter-related markets, this system being represented by a set of simultaneous equations which state the conditions to be satisfied for equilibrium - demand equal to supply, or excess demand equal to zero in each market. Excess demand in each market is taken to be a function of the price in that market and of all other prices. Two questions are posed: does a set of prices exist which yields simultaneous equilibrium in all markets (the issue of the *existence* of equilibrium)? And, secondly, if such a set of equilibrium prices does exist, will the market mechanism succeed in establishing these prices (the issue of the *stability* of equilibrium)?

Take a very simple illustration of the nature of the general equilibrium model. Suppose there are n goods traded within an economy - specifically 5 goods (in reality there would of course be thousands) - goods a, b, c, d and e. If we take one of these as the numeraire and set the price of one unit of that good at unity (Pe, say, equals 1), there are then n - 1 (4) relative prices - Pa, Pb, Pc and Pd in terms of good e - to be determined. There are at the same time n (5) equilibrium conditions (n XD equations) to be satisfied. It might at first sight appear that we have more determining equations than unknowns (5 as against 4). In fact, by "Walras' Law" we actually have only n - 1 (4) *independent* excess demand equations - the same number of equations as unknowns. Conventionally we take it that, with equality in number of unknowns and independent determining conditions, it is reasonable to suppose that a solution - a set of prices which yields market-clearing equilibrium - exists.[6]

Let us now reformulate this simple model as a macro model.[7] Again suppose that there are 5 markets within the system - but now assume that these are markets for consumption goods (C), capital goods (K), labour (L), bonds (B) and money (M). It is assumed that the given stock of money consists of a certain number of nominal units. Taking money as the numeraire, the unknowns are 4 relative prices (of C, K, L and B) expressed in terms of money. (When these 4

[6] As equality of unknowns and independent equations does not in fact guarantee a solution, "we have to abandon the confidence of Walras for the much less certain hope that there is a unique solution". (Johnson, 1971, p.103) That is certainly the usual procedure; thus Patinkin (1965, p.37): "Now, equality between the number of unknowns and the number of independent equations is neither a necessary nor a sufficient condition for the existence of a solution. Nor does it ensure that solutions, if they do exist, will be only finite in number. For our purposes, however, these highly complicated issues can be ignored. Instead, we shall accept such equality as justifying the reasonableness of the assumption that one and the same [unique] set of money prices can simultaneously create equilibrium in each and every market."

[7] Note Weintraub (1974, p.15): "In a real sense, macroeconomics *is* general equilibrium theory with some of the many markets grouped together for expositional clarity and convenience. In a general equilibrium schema of about 80,000 markets describing the behaviour of all prices in an economy, perhaps the first 40,000 markets are for consumer goods, the next 20,000 for capital goods, with 10,000 for labour services, 10,000 for financial assets, and a few for money. Combining markets for similar goods there is 'merely' the problem of five markets: consumer goods, investment goods, labour services, financial assets, and money."

prices are specified the value of the money supply in terms of goods - M/P - is implied.[8]) To determine the 4 unknowns, there are, by Walras' Law, 4 *independent* excess demand equations amongst the 5 excess demand equations of the system. Thus we may conclude that it is reasonable to suppose the existence of an equilibrium set of prices. (Furthermore, and again following convention, we may suppose that the price mechanism works in such a way as to establish that set of prices if equilibrium has for any reason been disturbed.) Thus, the model we have here is, in conventional neoclassical terms, read as representing a macro system in which price adjustments should be capable of establishing full employment equilibrium. If this is taken as a parable with something to say about the real world, the moral would seem to be that, with a properly functioning price system, i.e. with flexible prices, full employment may be regarded as the natural state of the economy. The corollary of that is, of course, that persistent disequilibrium - persisting unemployment - would be attributable to inflexibility of prices.

The above model - employing the Walrasian conception in the macro context - simple though it is, essentially represents the neoclassical view of the functioning of the macroeconomic system. That is the conception of things which underlies the almost universal textbook assertion that the Keynesian explanation of unemployment must reside in price rigidity, that underlies the New Classical and Rational Expectations accounts of (what are said to be at most) temporary deviations from the Natural Rate of Unemployment, and indeed underlies the concern of the (so-called) "New Keynesian" school with the causes of price stickiness or price rigidity. All these several varieties of macroeconomic theorising share the characteristic neoclassical belief - perhaps "faith" would be a better word - that the achievement of full employment equilibrium is a matter of "getting prices right". But is it?

Consider again our simple Walrasian macro model and imagine that initially the situation is one of full utilisation of production capacity and full employment. Now suppose there occurs a fall in the demand for capital goods. If demand remains low, producers in that sector will reduce production and cut employment and, as incomes fall, the recession is transmitted via the

[8] It is assumed that there is a demand for real money balances (M/P) and that the price level (P) is specified in terms of the prices of a particular basket of goods.

multiplier process throughout the economy. In terms of the IS/LM model the IS curve (and possibly the LM curve as well) has moved to the left and the economy settles to a new equilibrium with production adjusted to the reduced level of aggregate demand and less labour employed than is available. The sum of excess demands is then *less* than zero: demand equals supply in the goods and asset markets, but supply exceeds demand in the labour market.

This condition of net excess supply poses a theoretical problem: by Walras' Law that state of affairs is an impossibility - the sum of excess demands *ought* to equal zero. If, in the C, K, B and M markets excess demand is zero, then, according to Walras' Law, demand and supply *must* be equal in the remaining market - i.e. there must be full equilibrium in the labour market. The logic of the conventional analysis rules out the occurrence of this situation of depression equilibrium - the existence of an excess supply of labour should necessarily imply the simultaneous existence of an equal value of excess demand for goods or securities which would directly or indirectly justify increased production. But in reality we can readily envisage such "slump conditions" in which labour is unemployed while demand equals supply everywhere else in the system. Walras' Law evidently doesn't square with that perception.

This is the point picked up by Robert Clower (1965) and Axel Leijonhufvud (1968) thirty odd years ago when attempting to capture the essence of Keynes's general theory within the Walrasian framework. Clower's explanation of the possible emergence of a net excess supply of labour - contradicting the prediction of Walras' Law - was that in a money-using economy planned or "notional" demand will not become "effective" demand if, because of lack of access to means of payment, agents are unable to express their intended demand on the market. In Clower's example unemployed labour has an unsatisfied demand for commodities but, with sales of labour services constrained and a consequent want of current income, does not have the necessary means of payment to make its demand effective. If, as in the Clower illustration, the real wage is stuck at too high a level, there exists simultaneously an excess supply of labour and a (notional) excess demand for goods, but without any actual pressure of demand in the goods market to raise prices relatively to money wages. The conclusion reached was that, under disequilibrium conditions, Walras' Law does not hold good: while it is true that taking notional and effective excess demands together the sum of excess demands does equal zero, with respect

to effective demand alone as actually expressed in the market, the general case is that sum of excess demands is, *at most*, equal to zero. With disequilibrium, net effective excess demand can be negative. Thus, it would appear, the conventional Walrasian model fails to comprehend the constraint on effective demand which exists in the circumstances of Keynesian "underemployment equilibrium".

On that basis, recognition of the possibility of negative net excess demand (net excess supply) emerging within the economic system was taken by Clower to be the crucial feature which differentiates Keynes's theory from conventional neoclassical theory. Clower argued that, even though Keynes framed his analysis in Marshallian rather than Walrasian terms, that in effect was the proposition he was advancing - that total excess demand within the economy did not necessarily sum to zero, implying that, with unemployment, the potential equilibrating force of positive excess demand need not in fact be operating to propel relative values towards a configuration consistent with full employment equilibrium.[9]

What do we make of this interpretation of the nature of Keynes's theoretical innovation? As we read it, Clower did not get to the root of the matter: he seems to have focused on a *symptom* rather than on the *cause* of depression conditions as understood by Keynes. What Clower has formally identified - in terms of Walrasian theory - is simply the multiplier phenomenon, which derives from the fact that if labour is thrown out of work, purchasing power is reduced and workers' effective demand for goods and services is thereby constrained. The Clower reading of Keynes has nothing to say about the *cause* of such a state of affairs - there is no consideration whatever of the reason why, in the first place, workers may have been laid off by their employers. The fact that the remedy as envisaged by Clower – a reduction of real wages - is the

[9] As Clower (1965) puts it: "Like us, Keynes does not in any way deny the generality of orthodox equilibrium analysis; he only denies that orthodox economics provides an adequate account of disequilibrium phenomena." And further: "I shall argue that the established theory of household behaviour is, indeed, incompatible with Keynesian economics, that Keynes himself made tacit use of a more general theory, that this more general theory leads to market excess-demand functions which include quantities as well as prices as independent variables and, except in conditions of full employment, the excess-demand functions so defined do not satisfy Walras' Law. In short, I shall argue that there has been a fundamental misunderstanding of the formal basis of the Keynesian Revolution."

same as that proposed by Pigou suggests that Clower had not, as he claimed, put his finger on the distinctive feature of Keynes's analysis of unemployment. Clower may have introduced the Keynesian multiplier to the Walrasian system, but there is much more than the multiplier in the *General Theory*.

The state of affairs envisaged by Clower – an economy stuck in unemployment because real wages are fixed too high for full employment – does in fact (whatever may have been intended) correspond to *Pigou's* picture of unemployment equilibrium. If we consider how such a Pigouvian situation would appear in Walrasian terms, we shall find a pointer to how the Keynesian conception may more adequately be represented in these Walrasian terms. Pigou takes it for granted that when production is offered on the market, demand (temporary, frictional difficulties aside) must be sufficient to take up whatever output is produced by labour of which the marginal product does not fall short of the real wage. (That is certainly the implication of treating, *a la* Pigou, the labour market exactly as the market for any final commodity, with equilibrium determined at the point of intersection of the demand and supply curves.) By Walras' Law, when (in equilibrium) the sum of excess demands equals zero, the situation in any one market of the economy can be inferred from the conditions prevailing in the rest of the system. Thus, if it happens to be the case (thinking of our 5 market model) that demand equals supply in the C, B, M and L markets (full employment), demand must also equal supply in the K market. From the Pigouvian perspective, so long as labour market conditions (specifically the terms of labour supply) remain unaltered, demand for output has to stay fixed at the full employment level. If, as Pigou represents the situation, employment is determined (*ceteris paribus*) in the labour market by conditions of labour supply, *there is simply no room for an independent investment (K demand) function.*

The thesis we are about to develop as to how the Keynes theory should be interpreted in terms of the Walrasian framework, a thesis which questions not only the *stability* of equilibrium in the case of a multi-market economy, but raises doubt also regarding the *existence* of an equilibrium set of values, derives from the original and important, but regrettably neglected, contribution by the distinguished Japanese economist, Michio Morishima (Morishima, (1977).

We have noted that Clower's attempt to connect the Keynesian and Walrasian models seems, though presumably that was not what was intended, to have landed us back in the theoretical conception of Professor Pigou. Let us see if we can find instead a Keynesian perspective. If, to break out of the Say's Law world implicitly assumed by Pigou, we introduce an independent investment function into our 5 market Walrasian system, the situation is significantly altered. It can no longer be assumed that if conditions are as specified in the C, B, M and L markets, the state of affairs in the K market is also determinate: we are now allowing the K market to go its own way – for the demand for K goods to reflect investors' views of the future, for their expectations and confidence to determine the orders placed, rather than for the volume of these orders automatically to correspond to the output available from the K goods industry.[10] There is now an "un-tamed" aggregate investment function; consequently we now have 5 independent equilibrium conditions to determine the 4 unknowns (relative values) within the economy. *The system is overdetermined*. That being so, there may be no solution to be found by price adjustment; if the system is overdetermined and no equilibrium set of prices exists, no matter how flexible wages and prices may be, there is no guarantee that unemployment can be eliminated through the free functioning of the market mechanism.[11] The root of the problem would lie not in imperfect working of the price mechanism, but in the existence of a fundamental

[10] Morishima (1977, p.95), observes that a "neoclassical full employment" situation is based on the assumption that "aggregate investment is perfectly flexible; that is to say the system lacks a non-trivial investment function, whereas it has a well-defined savings function. . . . It is really because of this lack of an investment function that investment can smoothly and quickly be adjusted to savings in our model and *not* vice versa. Such an economy, with perfectly flexible investment, is said to satisfy Say's law. With this law, there is no obstacle to full employment equilibrium. It is indeed because of the premise of Say's law that neoclassical economists could be confident of full employment equilibrium; therefore, it was a prime target of Keynes' attack. In fact, he rejected the perfect flexibility of investment by introducing an investment function; then he found that the system was over-determined and full employment was not attainable."

[11] If it is "reasonable" to suppose that, with an equal number of independent equations and unknowns, that a solution exists, it may be correspondingly reasonable to doubt the existence of a solution when the number of independent equations exceeds the number of unknowns. "[If, with more equations than variables, the equations are linear and independent, they cannot be consistent.] If the equations are linear and inconsistent . . . then there is no solution. If the equations are not all linear, no general statement can be made." From C F Christ, 'An Aside on Counting Variables and Equations in Systems of Simultaneous Equations', quoted by Johnson (1971), p.107.

inconsistency within the economy. The parameters of the system, that is to say, may be inconsistent: in economic terms it is perfectly feasible that current plans to sell labour services and current plans to purchase commodities, including the purchase of new producers' goods, are are simply incompatible.

Thus, freeing aggregate demand from the constraint of Say's Law (as represented by the supposition of a "tame" investment function), we can no longer presume the existence of a solution in the form of a set of market-clearing prices – there need not be any set of prices at which all the conditions for equilibrium within the economy are simultaneously satisfied. *Price flexibility is not then the key to the attainment of full employment equilibrium.* What is critical is the consistency of the parameters, the state of which is variable.

Morishima (1977, p.115-6) compares (in effect) the Pigouvian and Keynesian visions:

> Suppose . . . that Say's Law is true. Then there exists a neoclassical full-employment, full-capacity equilibrium. Even in this case, if the wage is set [above the full-employment level], then no forces work to move the economy towards the equilibrium, because of the downwards rigidity of the wage rate. That is to say, the neoclassical equilibrium is prevented from prevailing in spite of its existence. If this were the case, we might ascribe the causes of unemployment to the downwards rigidity of wages and hence to the trade unions. Keynes, however, opposed this view; he believed that the neoclassical full-employment, full-capacity equilibrium does not exist, because investment is determined independently of savings and, therefore, even if the wage is perfectly flexible, the economy cannot settle down at any point because of the overdeterminacy. Only the downwards rigidity stops this endless fluctuation, but is not the cause of under-employment because the removal of it will not lead to full employment. . . . Keynesian unemployment is the particular unemployment which corresponds to that level of savings which equals the level of investment independently determined.

The reason why the investment demand function must (in a realistic context) be treated as independent is that investment decisions are – a central point of the Keynes theory – made under conditions of uncertainty. This means irreducible uncertainty, not risk such as can be covered by insurance. If the uncertainties respecting the returns to be got from investment could be eliminated by forward trading or insurance, then there would never be any case from holding back from investment so long as the physical conditions of production were capable of yielding

profit. But if there is no way of ensuring that all possibilities of loss are excluded by making suitable arrangements, then investment must depend on the subjective factors - expectations, confidence in these expectations, hopes and fears – that enter into the investor's decision-making.

This is a point at which we come up against the fact that economics is, as Keynes regarded it, a "moral" science and not a natural science[12]: the investor's decision is a human decision and should not be treated as link in a purely mechanical sequence whereby whatever resources are left aside from current use are automatically channelled to investment.

Frank Hahn (1982), discussing the implications for the Walrasian general equilibrium system of allowing for uncertainty, makes in effect the same point – that in a Keynesian world, in which expectations play a critical role, the attainment of full equilibrium cannot be guaranteed. He points out that the existence of irreducible uncertainty means that a complete set of markets, such that the entrepreneur can eliminate all possibility of loss, will not exist. The consequences are serious: "if the invisible hand is to operate there must be sufficient opportunities for intertemporal and contingent intertemporal trade. . . . The lack of contingent markets means that the market economy is associated with more uncertainty than pure theory allows. The lack of intertemporal markets means that great weight must rest on market expectations." In such circumstances the system is, rather than being completely interdependent, "open-ended" in that the outcome (the state of the economy) depends on subjective, essentially independent factors. Hahn remarks that "Keynes . . . placed great emphasis on the fact that he did not invoke [the complete markets postulate]".

[12] Keynes (1973, p.300): "I want to emphasise strongly the point about economics being a moral science [and not a natural science]. I mentioned before that it deals with introspection and values. I might have added that it deals with motives, expectations, psychological uncertainties. One has to be constantly on guard against treating the material as constant and homogeneous. It is as though the fall of the apple to the ground depended on the apple's motives, on whether it is worth falling to the ground, and whether the ground wanted the apple to fall, and on mistaken calculations on the part of the apple as to how far it was from the centre of the earth."

The significance of our investigating in terms of the Walrasian framework the implications of the Keynes theory is that it becomes formally evident that in the case of a multi-market economic system operating in real world conditions of uncertainty, there can be no guarantee that in all circumstances an equilibrium solution (in the form of a market-clearing set of prices) actually exists. This finding confirms Keynes's message that the degree of wage and price flexibility is not the critical factor to which attention should be directed in the analysis of unemployment.

A non-Walrasian framework

In order to deal with the conventional neoclassical wisdom on its own terms, we have discussed the issue of Say's Law and overdeterminancy with reference to a Walrasian-type model. It would however be more appropriate to set the Keynesian argument within the framework of a classical (*old*-classical) model which is explicitly of a surplus-producing economic system. Using such a framework, the same point can be made that rejection of Say's Law calls in question the presumption that full employment equilibrium can necessarily be achieved via price changes which establish a set of equilibrium prices implicit in the structure of the system. Consider the following illustration.

Suppose that, in total, n goods and services - including intermediate goods, final consumption goods and investment goods - are produced within an economy, with output in excess of what is required to replace everything, including the wages of the workforce, used up in the course of production. For equilibrium in the product markets, it is not enough simply that demand equals supply: quantities demanded and supplied must be such that long run equilibrium prices (classical "natural values") obtain with prices which cover costs of production including profit at the going rate. Suppose that a certain supply of labour is offered for employment, and that the rate of real wages is determined by institutional factors at a conventional level. That wage must imply also, given the physical rate of surplus productivity, a determinate rate of realised profit at the full employment level of activity. Suppose too that money (a certain nominal supply being given) is used within the economy as the medium of exchange and a store of value and that lending and borrowing take place through trade in bonds on the financial (bond) market. We take

it that all wage income is automatically spent on consumption goods and that profits may, in principle, be saved or put to the acquisition of new investment goods.

We assume first of all that Say's Law applies and that a state of full employment equilibrium exists. Let us again count unknowns and independent equations. In the model thus specified, (with the predetermined rate of real wages, and taking money as the numeraire) there are n + 3 unknowns to be determined: n commodity prices in terms of money, the quantity of labour employed, the price of bonds and the rate of profit. To determine these unknowns we have one equation specifying (given the exogenously-determined real wage and the technologically-determined wage-profit relationship) the return on capital invested, together with a set of simultaneous excess demand equations for n commodities (reflecting given conditions of production and demand), labour, bonds and money. If we take it that Walras' Law applies to the system in equilibrium, this set of n + 3 equations contains (with agents' spending constrained by income receipts and asset sales), n + 2 independent equations. Thus, counting the wage-profit equation, we have in total n + 3 independent equations to determine the n + 3 unknowns of the system.

When full-employment is understood to exist there is no problem in accepting that if the ("nth") equation rendered redundant by Walras' Law is the (or an) excess demand equation for capital goods, equilibrium in the other markets implies simultaneous equilibrium in the deleted market. But if we drop the Say's Law assumption that "tame" aggregate demand ensures full employment, we are in no position to know whether, everything else remaining unchanged, demand does or does not equal supply in that particular market. Without Say's Law, Walras's Law doesn't apply either and the "nth" excess demand equation can no longer be considered redundant. Just as before, in terms of the Walrasian-type model, when we had equality of unknowns and independent determining equations, in this case we find again, when that condition is satisfied, that there is no room for an independent demand function or functions for capital goods. Thus again, if we abandon the assumption that aggregate demand is "tame", and allow for investment spending being independent of labour market conditions, we must accept (at least) one other independent excess demand equation. When we do so, we have at least n + 4 independent equations to determine the n + 3 unknowns of the system. The system is thus

overdetermined: it cannot be assumed that attainment of equilibrium is simply a matter of allowing the forces of supply and demand to establish an implicit set of market-clearing prices. There is no reason to suppose that, without Say's Law, such a set of prices at all times necessarily exists.

Current theoretical fashion

The principal contemporary challenge to the Keynes theory comes from an old direction, from the resussitation, under the New Classical banner, of neoclassical employment theory of the pre-Keynesian sort. This probably goes back to Phelps' (1967) and Friedman's (1968) reinterpretation, in the era of "stagflation", of the (short-run) Phillips curve as showing employment changes as a function of price and wage changes, rather than *vice versa*. The thesis advanced by Phelps and Friedman was that the negatively-sloped Phillips curve relationship, as they interpreted it, obtained only in the short run on account of temporary misperceptions by the workforce about the real value of going money wages or on account of wage rigidity. It was argued that, in the longer term, with these disturbing factors absent, spending changes would have an effect only on prices and not on employment and output. From this treatment of prices, wages and employment the now-conventional macroeconomic aggregate supply (AS) curve was developed - the AS curve being shown as positively-sloped in the short run if wage rigidity or errors are taken to apply, and vertical in the long run when "proper" responses to demand disturbances are supposed to be made.

This account of fluctuations in employment and output, told in terms of short and long run AS curves, is of course (no matter whether the particular story told is described as "New Classical" or "New Keynesian") based on the old pre-Keynes conception that employment is determined in the labour market at the point of intersection of the labour demand (marginal product of labour) and labour supply schedules. From this perspective, variations in employment can occur in the short run only if conditions of labour supply alter (i.e. if the labour supply curve shifts); if these conditions do not change, then, no matter what happens to aggregate demand, employment and output will not be affected. Such a representation of the labour market has no room for the notion of involuntary unemployment, with labour "off its supply curve" on account of a deficiency of

demand for output. Likewise, the validity of this labour market model requires that Say's Law holds good, as any increase in labour supply (rightward shift of the supply curve) must be accompanied by a corresponding increase in demand for output. Thus, the presently fashionable macroeconomic AS curve represents, without any doubt, a reversion to a pre-Keynes conception of the working of the labour market - exactly *a la* Professor Pigou.

The other element of the current AD/AS model, the AD function, is, from a Keynesian viewpoint, equally suspect. The original proponents of a wealth / real-balance effect never pretended that a significant and reliable functional relationship existed between changes in the price level, particularly in the downward direction, and effective demand for output. It was viewed by them as of negligible practical significance. But nowadays, in the macro literature, the downward-sloping AD curve is presented, without qualification or reservation, as representing (just as reliably as the downward-sloping demand curve for an individual commodity) a relationship between the level of prices and aggregate demand. It doesn't seem that those who make use of this function have considered, and found an answer to, the problems of which earlier writers were aware - it looks rather as if these once well-recognised difficulties with the AD function are simply ignored. Nevertheless, in contemporary neoclassical macro theory, this questionable AD curve (as a component of the AD/AS model) comes to represent the Keynesian contribution.[13]

There is another point about the AD function which should be noted. AD as derived from IS/LM is not really a demand function at all: what it actually shows (putting aside the unconvincing nature of the postulated relationship) is a relationship between the price level and the equilibrium level of activity, rather than between price and demand). It has been suggested (Collander, 1995) that this function may more properly be designated an "aggregate equilibrium curve", since it depicts possible states of macroeconomic equilibrium according to the level of prices, *ceteris paribus*.

[13] This suspect AD function may perhaps be considered an example of what Professor Joan Robinson would have called "bastard Keynesianism"

If we return to the neoclassical AS curve, it will be observed that it also, is, in effect, an "aggregate equilibrium curve", as it too depicts possible price level output combinations at which the economy might be in equilibrium with aggregate demand equal to aggregate supply. (As the labour market model implies the validity of Say's Law, it must be the case that for every price level, real wage rate, and state of labour supply represented along the curve, demand for output must be such as to justify that level of employment.)

When the two curves are put together to form the standard AD/AS model[14], we have a theoretical nonsense. Each curve in itself, being in its own terms an "aggregate equilibrium curve", indicates an equilibrium state of the economy in terms of output and the price level. The two cannot be put together as one model - the fashionable AD/AS construction is in fact an illegitimate attempt to combine the incompatible. [On the rehabilitation of the neoclassical theory of employment and the deficiencies of the AD/AS model, see Grieve (1998).[15]]

It is worth noting that the AD/AS hotchpotch has been equally condemned from a purist New Classical perspective. Thus Barro and Grilli (1994, p.428):

> The main problem with the AS-AD framework is that the various pieces of the model are contradictory. The AD curve reflects the underlying IS/LM model . . . The AS curve assumes that producers (and workers) can sell their desired quantities at the going price, P. That is why the quantity supplied rises when P increases relative to P^e (the expected price level). This set-up is inconsistent with the Keynesian

[14] By the "standard" AD/AS model we mean the construction composed as described in the text. The label "AD/AS" is also applied (inappropriately) to other constructions of a superficially similar, but in reality very different character, in which the "AD" curve is understood to show a relationship between the price level and *output* and the "AS" curve depicts price changes per period of time as a function of the level of output. Such a model (which might more properly be described as an "AO/PP" – "output / price level model" – is free of the inconsistency of the standard AD/AS construction, and can provide a framework for analysis of inter-related changes in aggregate demand, output and prices.

[15] *Vide* also Rao (1998) for various perspectives on the AD/AS model.

idea – present in the IS/LM model and therefore in the AD curve – that producers and workers are constrained by aggregate demand in their ability to sell goods and services.

We find then the extraordinary situation that modern neoclassical macroeconomics is apparently content to employ a model which attempts to embody at the same time - as supposedly complementary elements - a "bastard" version of the Keynesian theory of demand and employment together with a representation of the "classical" theory of employment and output - the theory which was the specific target of Keynes's attack in the *General Theory*. When it comes to interpretation of this mongrel construction, it is the pre-Keynesian element that in fact becomes dominant. The quasi-Keynesian component is essentially redundant when the model is used to present a story to the effect that if spending changes affect output and employment at all, they do so only if on the supply side of the labour market there is some "inappropriate" response to the disturbance; such deviations from the "natural rate of unemployment" are understood as transient and self-correcting, since misperceptions are soon corrected or wage rigidity relaxed. Whether the authors of such accounts realise it or not, they are to all intents and purposes repeating the standard pre-Keynesian account of cyclical fluctuations in employment.

Conclusions

It has been our purpose to question the common presumption that flexibility of wages and prices is enough to ensure (at least eventually) the attainment of full employment. Too little attention, we conclude, is paid to the possibility that, even with wage and price flexibility, such adjustments may be incapable of reconciling overall conditions of demand and supply so as to generate full employment. It may very well be the case, with savings and investment in a world of uncertainty, that, in given circumstances, no set of equilibrium prices actually exists to be found through the free functioning of the price mechanism: the problem is not that prices are inflexible but that the state of aggregate demand is incompatible with the conditions of labour supply. We suggest that the convention of taking it as "reasonable" to assume the existence of a set of equilibrium values ceases to be reasonable if the Walrasian general equilibrium approach is extended beyond its initial application in the case of consumers swapping goods on a desert island beach. In the real world, inflexibility in the downward direction of money wages and

prices may actually, as Keynes suggested, be viewed as beneficial, contributing to stability rather than inhibiting adjustment to full employment equilibrium.

We note too it is unfortunate that much macroeconomic discussion is currently conducted in terms of a theoretical model which cannot but confuse. The the presently fashionable AD/AS model has rightly been condemned as a muddled hybrid which should have no place in macro analysis. The whole conception implies, in the macro context, an inappropriate analogy with microeconomic adjustment to equilibrium through short and long-run price changes. Each of the incompatible individual parts of the model involves unjustifiable assumptions about the benign consequences of price flexibility. On the AD side, all the reservations earlier expressed as to the necessarily positive effects of deflation on aggregate demand have apparently been forgotten – it is not that doubts on these matters have been answered, rather that the problems have been swept under the carpet, allowing the unqualified assertion that there exists a reliable inverse relationship between the price level and the volume of aggregate demand. On the AS side of the analysis, the essence of Keynes's rejection of the "classical" theory – that unemployment in the labour market depends on the state of demand for output and not on the terms on which labour services are offered – is likewise overlooked: overlooked, it would seem, through want of understanding, rather than rejected on theoretical grounds. The conventional view, that is to say, whether offered under the "New Classical" or "New Keynesian" label, is that variations in employment occur only with changes in the effective conditions of labour supply. Thus the categories of unemployment recognised by the typical contemporary macro textbook are again, as in the pre-Keynesian era, restricted to frictional and perhaps voluntary: Keynes's concept of *involuntary* unemployment has disappeared from view. The presumption that price flexibility ensures full employment turns the theoretical clock back seventy years.

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